

COMPARATIVE ANALYSIS OF KNOWLEDGE LEVEL OF PADDY FARMERS ON NUTRIENT MANAGEMENT

D. SHASHANK, I. SREENIVASA RAO, A. SAILAJA & M. MADHAVI

Department of Agricultural Extension and Agronomy

Professor Jayashankar Telangana State Agricultural University, Hyderabad, Telangana, India

ABSTRACT

To know the knowledge of paddy farmers on nutrient management, a study was conducted in Nalgonda district of Telangana state. Five villages from three mandals were selected for the study. Thereafter, 90 farmers i.e., Six farmers from each village (3 State Agricultural University recommendation followers and 3 Farmers Practice followers) were interviewed for this study. The results showed that majority (57.8%) of SAU recommendation followers had high level of knowledge about nutrient management in paddy. But more number of farmers practice followers (40%) fell in low knowledge category. SAU and FP follower had highly significant difference in farming experience, extension contact, information seeking and knowledge about nutrient management practices.

KEYWORDS: Nutrient Management, Recommendation, Management Practices

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INTRODUCTION

Rice (*Oryza sativa*. L) is an important staple food for about 70 per cent of the Asian population (nearly 3 billion people). More than 75 per cent of rice worldwide is produced in irrigated rice lands and 90 per cent of these irrigated lands are found predominantly in Asia (Bouman *et al.* 2006).

The part of synthetic composts for expanded agricultural produce specifically in developing nations is understood. Some contend that artificial manure was as critical as seed in the Green Revolution (Tomich *et al.* 1995) contributing as much as 50 for each penny of the yield development in Asia (Hopper 1993 and FAO 1998). Others have observed that 33% of the grain production globally is because of the utilization of artificial manure and related components of production (Bumb, 1995).

Manure utilization in India has been expanding throughout the years and today India is one of the biggest maker and customer of composts on the planet. By 2009-10 total manures utilization in the nation was 26.49 million nutrient tons. The utilization of synthetic manures (regarding supplements) amid 2009-2010 has been 264.86 lakh million tons, which is higher by 6.3% than 2008-09 utilization.

In the present days, the different nutrient management packages followed in rice crop includes Recommendations from State Agricultural Universities (SAUs), Research stations as well as farmers are adopting different doses of fertilizers (FP) based on their experience and other different socio economic reasons.

There is no single suggestion for rice fertilization which will suit all circumstances. Fertilizer application will differ significantly, contingent upon yield prerequisites, the accessibility of manures, the money related assets

of the farmer, and above all, the capacity of the agriculturist to take after application plans. Tests and field encounter under State Agricultural Universities, have demonstrated that the utilization of 40 kg per acre of nitrogen, 24 kg per acre of phosphorus, and 16 kg per acre of potassium gives ideal results under most neighborhood states of Telangana state.

Obviously numerous farmers will be either unwilling or not able to buy this measure of fertilizer, they will end up fertilizing at a much lower rate (or not in any way). Diminishing the measure of manure will bring about more unassuming yields, however remember that any measure of compost, regardless of how little, will help. On the off chance that a rancher deems to treat yet can manage the cost of one and only pack of N-P-K 15-15-15 kg for every section of land, don't really demoralize him/her. If connected appropriately, even this moderately little measure of compost will influence good results. A portion of the farmers seem, by all accounts, to be talented in embracing manure application hones. Rather than taking after the prescribed practice, they somewhat diminish the measure of NPK or blend NPK and urea manures (Saidou et al., 2004). The practices are guided by financial motivating forces; both the need to lessen work inputs (i.e. to decrease work costs on account of blending manures) and the need to lessen money. In this way, the present practice should be guided by recognizing edge level of least rate of fertilizer. The high yielding assortments are reacting to larger amounts of nitrogen, phosphorus and potassium than what is suggested today (Channabasavanna et al. 1996)

Hence, this study was conducted with the following specific objectives.

- To compare the knowledge of SAU and FP paddy farmers
- To find out relationship between profile characteristics of farmers and knowledge on nutrient management practices

METHODOLOGY

Nalgonda district was selected purposively for the study due to following reasons. It is one of the major rice cultivating districts of the state. About 75 percent of the population of district depending on agriculture and the main commercial crop is rice. About 30.5 per cent area of the district is under the rice cultivation. The gross cropped area of the district is 4, 05,315 ha with the production of 6, 83,868 tonnes with the productivity of 3280 Kgs / ha of the crop. It is also found that there is a large variation in actual fertilizer requirement of the rice crop and fertilizer being applied by the farmers in the district. Farmers of the district are applying 1.5 to 2 time's excess of fertilizers than the recommendation, in the form of complexes.

Three mandals were selected by stratified random sampling procedure. Five villages from each mandal were selected for the study. Six farmers from each village (3 State Agricultural University recommendation followers and 3 Farmers Practice followers) were interviewed for this study. Thus, a total of 90 farmers constituted the sample for the study. The knowledge of the respondents regarding the nutrient management packages in rice, was measured by using structured schedule for rice growers, consisting of questions which were prepared after thorough references from the recommended package of practices and discussions with experts in the respective fields is used for the study. The data were analyzed using mean and standard deviation, frequency distribution method and 't' test.

RESULTS AND DISCUSSIONS

Knowledge level of farmers related to nutrient management practices: It could be revealed from Table1 that majority of the SAU followers (57.8%) had high level of knowledge about nutrient management compared to FP Followers (26.7%). More number of SAU followers (22.2%) fell in medium category as compared FP Followers (33.3%). There were only 20.0 per cent of SAU followers and 30.00 per cent of FP followers, found in low category. When sample were pooled, majority of the farmers (42.2%) fell in high category of knowledge about nutrient management practices. Almost an equal percentage of the farmers fell in low and medium (30% and 27.7%) category of knowledge about nutrient management practices, respectively

Table 1: Knowledge Level of Farmers Related to Nutrient Management Practices

	SAU Practice (N = 45)			Farmers Practice (N = 45)			Total (N = 90)		
	L	M	H	L	M	H	L	M	H
F	9	10	26	18	15	12	27	25	38
%	20	22.2	57.8	40	33.3	26.7	30	27.7	42.2

Relationship analysis between selected traits of paddy farmers and their knowledge related to Nutrient Management practices: : It is apparent from Table 2 that there existed a positive and highly significant relationship between farmers' education, farm size, farming experience, irrigation water supply, information seeking behaviour, extension contact and capacity enhancement activities in both the areas except in age, annual income, machinery ownership, profit oriented behaviour in case of SAU followers and age, farming experience, irrigation water supply, information seeking behaviour, machinery ownership and profit oriented behaviour in case of FP followers.

Table 2: Correlation Coefficients of the Selected Traits of the Farmers with Their Knowledge Level Related to Nutrient Management

S. No	Characteristics	SAU Followers (r)	FP Followers (r)
1	Age	-0.015NS	-0.063NS
2	Education	0.425**	0.292*
3	Annual income	0.010NS	0.214*
4	Farm size	0.231*	0.201*
5	Farming experience	0.269*	0.135NS
6	Irrigation water supply	0.238*	0.004NS
7	Information seeking behaviour	0.420**	0.004NS
8	Extension contact	0.306*	0.270*
9	Machinery ownership	0.088NS	0.099NS
10	Capacity enhancement activities	0.236*	0.296*
11	Profit oriented behaviour	0.037NS	0.031NS

Table 3: Mean Differences in Paddy Farmer's Knowledge about Nutrient Management Practices

S. No	Respondent Category	Size of the Sample	Mean	S.D	'Z' Value
1	SAU	45	16.02	2.76	15.2424*
2	FP	45	8.44	1.86	

Table 3 clearly revealed that the SAU followers had highly significant difference (Z=15.2424) in the knowledge about nutrient management practices. It is quite clear from the above findings that SAU followers had higher significant knowledge about nutrient management practices rather than FP followers. The findings also supported by

CONCLUSIONS

In fact the knowledge level nutrient management practice in SAU followers was higher than the FP followers. With the above results, it could be concluded that irrespective of practice, the knowledge level about the nutrient management could be improved by enhanced by organizing various training programmes, extension methods etc.

REFERENCES

1. Bouman, B.A.M., Humphreys, E., Tuong, T.P and Barker, R. 2006. Rice and water. *Advances in Agronomy*. 92:187 – 237.
2. Bumb, B. 1995. Global fertilizer perspective, 1980-2000: The challenges in structural transformation. *Technical bulletin*. 42.
3. Channabasavanna, A. S., Setty, R. A. and Hanumaretti, N. G. 1996. Studies on response of paddy to water regimes and F levels under deep black soils of TBP. *Farming Systems*. 12 (1&2): 26-29.
4. FAO. 1998. Guide to efficient plant nutrition management. Food and Agriculture Organization, Rome.
5. Hopper, W. 1993. Indian agriculture and fertilizer: An outsider's observation, Key note address to the FAI seminar on emerging scenario in fertilizer and agriculture: Global dimensions, The Fertilization Association of India, New Delhi.
6. Saidou, A., Kuiper, T.W., Kossou, D., Tossou, R and Richards, P. 2004. Sustainable soil fertility management in Benin: learning from farmers. *NJAS Journal of Life Sciences*. 52: 349-369.
7. Tomich, T., P. Kilby and B. Johnson. 1995. Transforming agrarian economies: opportunities seized, opportunities missed Ithaca, Cornell University Press.